

DRAFT

ORDINANCE NO. XX-2009

**AN ORDINANCE OF THE CITY OF FREMONT, AMENDING
THE 2007 CALIFORNIA FIRE CODE TO REQUIRE SPRINKLER
SYSTEMS IN “B” OCCUPANCIES AND TO PROVIDE SOLAR
PHOTOVOLTAIC INSTALLATION GUIDELINES**

THE CITY COUNCIL OF THE CITY OF FREMONT DOES ORDAIN AS FOLLOWS:

SECTION 1. DRAFTING SYNTAX

Fremont Municipal Code (FMC) section text is italicized in this ordinance to assist the reader in distinguishing between the California Fire Code modifications and the FMC section text adopting the modifications. Those portions of the California Fire Code that are not modified are indicated by the section numbers followed by “{CFC text not modified}” which is to be codified as written. Those portions of the California Fire Code that are not adopted by the City of Fremont are indicated by the section number(s) followed by “- deleted”.

SECTION 2. FMC §7-1720.903 AMENDED

Section 16 of Ordinance 32-2007 added Section 7-1720.903 to Fremont Municipal Code Title VII, Chapter 1, Article 7, modifying portions of 2007 California Fire Code (2007 CFC) Section 903. This ordinance amends FMC Section 7-1720.903 to further modify 2007 CFC Section 903.2.1 to include both “A” and “B” occupancies as set forth in this section. The remaining amendments to 2007 CFC Section 903 adopted by Ordinance 32-2007, Section 16, are substantively unchanged and included in this amendment of FMC 7-1720.903 with certain formatting changes for clarity. Fremont Municipal Code Title VII, Chapter 1, Article 7, Section 7-1720.903 is amended to read:

Sec. 7-1720.903. Amendments to 2007 CFC Section 903

Section 903 of the 2007 California Fire Code is amended to read:

903.1 – 903.1.1 {CFC text not modified}

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

Exceptions:

1. reserved.
2. Automatic fire sprinkler protection for fixed guideway transit systems shall be as provided in Section 903.2.17.

3. Canopies over motor vehicle fuel dispensing facilities when constructed in accordance with Section 406.5 of the 2007 California Building Code.
4. Temporary construction trailers, less than 1000 sq ft, on-site less than one year and 20' from property lines, building, structures and combustibles.
5. The following detached Group U occupancies: Barns, fences more than 6 feet high, grain silos accessory to residential occupancies, green houses, livestock shelters, retaining walls, sheds, stables, tanks, towers.
6. Detached Group U occupancies housing dumpsters or refuse containers with floor areas of 500 square feet or less are exempt from installation of automatic fire extinguishing systems.
7. Detached one-story Group U occupancies housing dumpsters or refuse containers with floor area of 500 to 1500 square feet are exempt from installation of automatic fire extinguishing systems provided all of the following requirements are met:
 - a. Building is constructed to Type IV, Type V 1-hour, or a higher fire-resistive construction, and
 - b. A local detection or alarm system is installed, and
 - c. Minimum five-foot setback to property line and ten-foot setback to any other building on the site is maintained.

903.2.1 Groups A & B. An automatic sprinkler system shall be provided throughout buildings and portions thereof used as a Group A or Group B occupancy.

903.2.1.1 Group A-1. An automatic sprinkler system shall be provided throughout Group A-1 occupancies.

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided throughout Group A-2 occupancies.

903.2.1.3 Group A-3. An automatic sprinkler system shall be provided throughout Group A-3 occupancies.

903.2.1.4 Group A-4. An automatic sprinkler system shall be provided throughout Group A-4 occupancies.

903.2.1.5 Group A-5. An automatic sprinkler system shall be provided throughout Group A-5 occupancies.

903.2.2 Group E. Except as provided for in Sections 903.2.2.1 for a new public school campus and 907.2.3.6.1 (fire alarm and detection) for modernization of an existing public school campus building(s), an automatic sprinkler system shall be

provided for Group E occupancies.

903.2.3 Group F. An automatic sprinkler system shall be provided throughout all buildings containing a Group F occupancy.

903.2.4 – 903.2.4.3 {CFC text not modified}

903.2.5 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exceptions: none.

903.2.6 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy.

903.2.7 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

903.2.8 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy.

903.2.9 Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.4 of the California Building Code or where located beneath other groups.

Exception: none.

903.2.9.1 Commercial Parking Garages. An automatic sprinkler system shall be provided throughout buildings used for the storage of commercial trucks and buses.

903.2.10 Windowless stories in all occupancies. An automatic sprinkler system shall be installed in windowless stories in all occupancies.

Exceptions: none.

903.2.10.1 Stories and basements without openings. An automatic sprinkler system shall be installed in every story or basement without openings.

903.2.10.1.2 – 903.2.10.1.3 - deleted.

903.2.10.2 – 903.2.17.2.6 {CFC text not modified}

903.2.18 Additions to existing Group A, B, E, F, H, I, L, M, R, S, and certain miscellaneous Group U occupancies. An automatic fire extinguishing system (AFES) shall be required in the entire building when the additional floor area to the existing building exceeds one of the following thresholds. For purposes of floor area calculations, Group U (private garages or similar) occupancies shall be included in the floor area calculation.

1. When the combined floor area of the existing and new floor area exceeds 5,000 square feet.
2. The addition to the existing structure exceeds 2,500 square feet.
3. The existing structure is increased in floor area by 50%. The increase in floor area shall be calculated cumulatively from July 1, 1999.

Exception: The existing portion of a one or two story building with no basement does not require automatic fire extinguishing systems when the following conditions are met:

- (a) The addition is protected by an AFES.
- (b) The addition and the existing structure are separated with two-hour or four-hour fire walls, any required protection, and fire rated openings according to type of construction.
- (c) An underwriter laboratory certified National Fire Protection Association Standard 72 approved fire alarm system shall be installed throughout the addition and the existing structure in all Assembly, Education, Institutional and Residential occupancies.

903.2.19 Additions to existing R-3 occupancies. An automatic fire extinguishing system (AFES) shall be required in the entire building when the additional floor area to the existing building exceeds one of the following thresholds. For purposes of floor area calculations, Group U (private garages or similar) occupancies shall be included in the floor area calculation.

1. The total floor area of the existing building plus the addition exceeds 5,000 square feet.
2. The existing structure is increased in floor area by 50%.

Exception: The entire residence including the addition does not require an AFES when all of the following conditions are met:

- (a) The approved addition does not exceed 1,000 square feet.
- (b) An approved local, hard-wired or similarly configured, fire alarm and smoke detection system is installed throughout the building.
- (c) No Planning or Building Department variances or exceptions are needed to accommodate the addition.
- (d) This exception may be used only once for the first addition or conversion of existing space to habitable space occurring after July 1, 1999.

903.2.20 Repair/Retrofit. All occupancies except certain Group U occupancies damaged during a fire or natural disaster shall require an automatic fire-extinguishing system to be installed in the entire structure. Retrofit criteria shall be as follows:

1. All installations of automatic fire extinguishing systems and signaling devices shall comply with the then current code.
2. Any occupancy that has been damaged as a result of a fire or natural disaster, except as otherwise noted, shall be retrofitted with an automatic fire extinguishing system to the entire building and structure in accordance with the following criteria:
 - a. When the estimated value of repair is less than 50 percent (50%) of the replacement value of the structure, the damaged portion(s) may be restored to their pre-damaged condition.
 - b. When the estimated value of repair is 50 percent (50%) or more of the replacement value of the structure, the entire building shall be retrofitted with an automatic fire extinguishing system.

903.2.21 Retrofit for Essential Services Facilities. When the estimated value of repair contained in the engineering evaluation is more than thirty percent (30%) of the replacement value of the structure, the entire building shall be retrofitted with an automatic fire extinguishing system.

903.2.22 Retrofit for Historic Buildings or Structures. The minimum criteria for retrofit of Historic Buildings or Structures shall be as included in Section 7-8115(b) of the City of Fremont Ordinance No. 2182, with due consideration given to the historical rating and nature of the structures. Additional standards and criteria, as noted in the California Code of Regulations and the State of California Historic Building Code, shall apply.

Where conflicts exist between the standards contained herein and the State of California Historic Building Code, the Historic Building Code shall govern.

903.3 – 903.3.1.2.1 {CFC text not modified}

903.3.1.2.2 Group R Occupancies. An automatic fire extinguishing system (AFES) shall be installed in all new Group R, occupancies.

The sprinkler system shall include protection in the following areas: garages, carports, bathrooms, concealed spaces, closets, water heater closets, laundry rooms, attic spaces, under walkways, or overhangs, balconies or decks greater than four feet in depth, at each floor under stair landing that is wholly or partially enclosed, and other areas where deemed necessary by the Fire Chief and the Building Official to protect the public health and safety.

903.3.1.3 {CFC text not modified}

903.3.1.3.1 Group R, Division 3 Occupancies. An automatic fire sprinkler system shall be installed in all Group R, Division 3 occupancies including garages, detached garages over 500 square feet, and other attached rooms.

When an Automatic Fire Extinguishing System is required, the system in R-3 occupancies up to 12,000 square feet may be installed to a modified NFPA 13D standard as follows:

A modified NFPA 13D system shall include areas such as; garages, carports, bathrooms, concealed spaces, closets, water heater closets, laundry rooms and attic spaces, under walkways, overhangs or balconies over four feet in depth, at each floor under stair landing that is wholly or partially enclosed; and meet the following requirements:

1. A one-inch water meter or larger may be required to meet AFES hydraulic calculations.
2. For new residences over 5,000 square feet, hydraulic calculations shall be required for all sprinkler heads in the most remote fire area up to a maximum of four sprinkler heads. For new residences of less than 5,000 square feet, hydraulic calculations shall be required for all sprinkler heads in the most remote area up to a maximum of two sprinkler heads.
3. Five gallons per minute for domestic use shall be added at the domestic and fire water supply split point. The hydraulic calculation shall also provide a minimum of a 10% safety factor per dwelling unit.
4. In residences with high, sloped, beamed, soffited, cathedral ceilings or smooth flat ceilings greater than nine feet, additional fire sprinkler head discharge calculations may be required.
5. Copper pipe shall not be used with steel or iron riser assemblies.
6. Each system shall have a single control valve arranged to shut off both the domestic and sprinkler systems.
7. In residential sprinkler projects, the fire chief with the concurrence of the building official may grant alternate methods of construction.

Exceptions. This section does not apply to:

- (a) Any structure exempt from permit requirements per Appendix Chapter 1, Section 105 of the California Fire Code is exempt from the requirements for fire sprinklers.
- (b) All exterior decks without roof covering adjacent to R3 occupancies, unless otherwise required by the fire chief or building official. This exemption shall not apply to R3 occupancies in the Hazardous Fire Area.

903.3.2 – 903.3.5.2 {CFC text not modified}

903.3.5.3 Underground water supply. The location of the fire department connection, post indicator valve and the routing of the water supply for multi-building facilities shall be evaluated on an individual basis.

903.3.6 {CFC text not modified}

903.3.7 Fire department connections. A fire department connection shall be provided for all buildings, or when the fire chief deems them necessary. The location of fire department connections shall be approved by the fire code official.

Exception: Group R3 occupancies less than 12,000 square feet do not require fire department connections.

903.3.8 Underground corrosion protection. A corrosion protection plan, including details and specifications for all ferrous underground piping must be designed and provided by a qualified corrosion engineer.

Exception: underground piping systems with cathodic protection on all ferrous piping.

903.3.9 Control Valves. An exterior control valve shall be provided for all buildings except Group R, Division 3 occupancies. Control valves and flow switches shall be installed on each floor. All control valves shall be monitored by a Central Station.

903.3.10 Stages. All stages shall be provided with an automatic fire extinguishing system. Such systems shall be provided throughout the stage and in dressing rooms, workshops, storerooms and other accessory spaces contiguous to such stages.

903.3.11 Stairs. An automatic sprinkler system shall be installed in enclosed usable space below or over a stairway in all occupancies.

903.3.12 Speculative Warehousing. The sprinkler system shall be designed to discharge at the following rates:

1. Where clear ceiling heights are 20 feet or less, 0.33 gallons per minute, per square foot, over a minimum area of 3,000 square feet.
2. Where clear ceiling heights are between 20 and 30 feet, 0.495 gallons per minute, per square foot, over a minimum area of 3,000 square feet.
3. Where clear ceiling heights are over 30 feet, 0.60 gallons per minute, per square foot, over a minimum of 3,000 square feet.

903.3.13 Modification to existing automatic fire extinguishing system (AFES). All changes or additions to any existing automatic fire sprinkler systems or underground fire lines will require compliance with all regulations within this section.

903.4 {CFC text not modified}

903.4.1 Signals. Alarm, supervisory and trouble signals shall be distinctly and descriptively different, which shall be annunciated to the control panel, local annunciator and automatically transmitted to an approved central station, remote supervising station, or proprietary supervising station as defined in NFPA 72 and the fire department standard 25A or when approved by the fire code official, shall sound an audible signal at a constantly attended location.

Exceptions: {CFC text not modified}

903.4.2 Alarms. Approved audible devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarms devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided inside each tenant space in a normally occupied area and on the exterior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall activate the building fire alarm system.

903.4.3 {CFC text not modified}

903.4.4 Central Station Monitoring. An approved central alarm monitoring company shall mean approved by the State Fire Marshal or a nationally recognized testing laboratory. All alarm transmitting devices and systems shall be installed and maintained in accordance with nationally recognized standards.

Valve supervision, water-flow alarm and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station, remote station or proprietary supervising station as defined by national standards or, when approved by the building official with the concurrence of the fire chief, sound an audible signal at a consistently attended location.

Exceptions:

- (a) Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be supervised.
- (b) Monitored systems are not required for Group R, Division 3 occupancies.
- (c) Group R, Division 3 occupancies shall have local alarms. Local alarms shall be of sufficient intensity to be clearly audible in all bedrooms over background noise levels with all intervening doors closed.
- (d) An exterior alarm bell shall be installed on the front 1/3 of the building facing public or private street access.
- (e) Interior alarm devices (minimum DCBL rating of 88) may be recessed into the wall, centrally located between sleeping rooms in hallway.

(f) Such alarms shall be audible in all sleeping rooms with doors closed.

903.5 – 903.6.1 {CFC text not modified}

SECTION 3. FMC §7-1720.4501 ADDED

Fremont Municipal Code Title VII, Chapter 1, Article 7, Section 7-1720.4501 is added to read:

Sec. 7-1720.4501 Amendments to 2007 CFC Section 4501

Section 4501 of the 2007 California Fire Code is amended to read:

SFM- State Fire Marshal - Solar Photovoltaic Installation Guidelines

SECTION 4. LOCAL CONDITION FINDINGS

The City Council finds the amendments herein to be consistent with and within the scope of the amendments to the 2007 California Fire Code previously studied and approved by the City Council in Ordinance 32-2007. The City Council hereby incorporates by reference Section 1 of Resolution 2007-84 and finds that the amendments contained herein are reasonably necessary because of local climatic, geological and topographical conditions.

SECTION 5. CEQA

The City Council finds under Title 14 of the California Code of Regulations, Section 15061(b)(3), that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is not a Project which has the potential for causing a significant effect on the environment. The Council therefore directs that a Notice of Exemption be filed with the Alameda County Clerk in accordance with the CEQA Guidelines.

SECTION 6. EFFECTIVE DATE

This Ordinance shall take effect and will be enforced thirty (30) days after its adoption.

SECTION 7. PUBLICATION AND POSTING

Publication of summary. The City Clerk shall cause a summary of this ordinance to be published under Government Code Section 36933(c), once in *The Tri-City Voice*, a newspaper of general circulation printed and published in Alameda County and circulated in the City of Fremont, at least five days before the date of adoption, and post a certified copy of the full text of the ordinance in the office of the City Clerk since at least five days before the date of adoption. Within 15 days after adoption of this ordinance, the City Clerk shall cause the summary of this ordinance to be again published in *The Tri-City Voice* with the names of those City Council members voting for and against the ordinance, and post in the office of the City Clerk a certified copy of the full text of this adopted ordinance with the names of those City Council members voting for and against the ordinance.

* * *

The foregoing ordinance was introduced before the City Council of the City of Fremont at the regular meeting of the City Council, held on the ____th day of ____, 2009 and finally adopted at a regular meeting of the City Council held on the ____th day of ____, 2009 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Mayor

ATTEST:

APPROVED AS TO FORM:

City Clerk

Senior Deputy City Attorney